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## Some Unusual Syrphid Flies

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Several flies of unusual interest that have been recently received are here described.

### *Cacoceria willistoni* n. sp.

A remarkable fissicorn fly differing from *cressoni* Hull in the black stripe along the second vein besides numerous other particulars. Length 10.5 mm.

Male. *Head*: vertex black, slightly raised; the ocelli lie in an equilateral triangle, the anterior part of the vertex quite pollinose with scattered whitish hairs, the posterior pile of the vertex somewhat more yellowish. The eyes are dichoptic, separated by a distance at least as wide as the total width of the ocellar triangle, and the front diverges sharply beyond this medial point. Across the medial point of the front there is a slender crease which is bare; the white micropubescence reaches above and below up to this bare crease. Most of the lower front, however, is polished and bare and the pubescence ends along the eye margin opposite the preantennal callosity and begins again just below the antennae where it curves downward and medialward to reach across the face below the antennae. There is also a broad band of sparse, whitish micropubescence which extends diagonally down from the eye margin to the epistoma. The face, metallic black in color, has a low inconspicuous tubercle in the middle, is faintly pollinose in the middle. Eyes bare. The antennae are slender and elongate, longer than the height of the head, and the third segment is

quite remarkable. It is developed into two long, deep, slender prongs; the dorsal prong is not quite as long as the ventral one and is slightly curved downward. This prong bears the long slender whip-like arista which is slightly and gradually thickened over the basal half and becomes quite fine at the apex. The first segment of the antennae is slender and elongate and five or six times as long as wide, pale brownish yellow on the basal half, becoming diffusely blackish apically and is considerably longer than the slender second segment which is entirely black. The third segment is entirely black and the arista dark brown. There are no traces of pores upon the third segment. *Thorax*: mesonotum dull black, rather convex, with a pair of widely separated, vittate stripes of yellow pile which is nearly erect but directed slightly forward. These stripes merge into a broad wide area of similar pile in front of the scutellum which is bordered on either side by short thick black pile. All of the pile on the sides of mesonotum behind the suture is black except for this middle area and except for a slender band of inconspicuous yellow hairs merging with the black which lies immediately behind the transverse suture. There are two or three scattered yellow hairs in the middle of the black pilose area and the pile of the post-calli is mostly black with a few yellow hairs. The pile in front of the suture is entirely brassy yellow but is subappressed and pointed backwards except upon the wide submedial stripes as previously described. Pleura dully shining black with whitish pile, the scutellum dark brassy brown, almost black with the margin obscurely and narrowly yellowish brown. The pile is short and yellow and there is a well developed yellow ventral fringe. Squamae and fringe blackish. Halteres yellowish white with a black knob. *Legs*: anterior and middle legs dark sepia-brown, the hind legs also dark sepia-brown except that the hind femora are narrowly but obscurely and diffusely pale yellow upon the attenuate portion at the base. As in the genotype, the femora are very much thickened and quite wide in the middle but gradually taper to the narrow apical and basal ends; the base is especially narrowed and spindle-shaped. Pile of hind femora whitish and

there are five slender, ventral, apical, widely spaced, sharp black setae. Hind tibiae quite arcuate and flattened with a sharp apical spur. *Wings*: hyaline with a distinct but diffuse, smoky blackish border along both sides of the second vein, from the point of origin of the vein in the middle of the wing, nearly to its junction with the costa. The anterior apical portion of the marginal cell is left clear; the pterostigma is entirely deep sepia-brown. *Abdomen*: subpetiolate in shape and chiefly dull black in color. The first segment is shining black, obscurely yellowish brown in the middle and the segment narrows considerably posteriorly and the second segment continues the constriction of the abdomen for a short distance and then begins to gradually expand so that the posterior end of the second segment is distinctly wider than the base of this segment. The second segment is narrowly and obscurely brownish yellow along the base but this color does not reach the sides. Immediately behind the yellow color the abdomen is nearly opaque black and this opaque black is gradually replaced by faintly shining bluish or greenish black. Third segment slightly wider posteriorly than basally and this segment is about as long as wide, its color faintly shining greenish to brassy black. Fourth segment together with the hypopygium forming a wide convex club-shaped arrangement. It is, however, not wider than the third segment; its pile is entirely short, appressed and yellow. All of the pile of the third segment is appressed and yellow except for a small area in the middle of the segment on the posterior half where the pile is blackish. The pile of the second segment is entirely black except for the long fine scattered hairs on the lateral margin. Pile of first segment whitish, long and fine upon the sides.

Female. Similar to the male in every respect except that the third antennal segment is not fissiform. The third segment is, however, quite long and slender and seems to be at least as long as the lower branch of the male. The abdomen is similar except that the second segment is not quite as much constricted basally.

*Holotype*: male, Chanchamayo, PERU, August 16, 1948, J. Schunke; *allotype*: female with the same data. In the author's collection.

In 1930 the author erected the genus *Cacomylia* with *cressoni*, from Mexico, as genotype, from a female specimen in which the third antennal segment was broken away at the base. The genus was based upon the peculiarities of the face, abdomen and hind femora. The name was changed by the author in 1936 to *Cacoceria* as the name *Cacomylia* was found to be preoccupied.

To the generic characterization of the genus then we now must add that the males are dichoptic and the third antennal segment deeply fissicorn in this sex.

### **Mesogramma rhea** n. sp.

Related to *hirocglyphica* Schiner. This pretty species is distinguished by the polished black abdomen in which the sides are narrowly light yellow, for most of the basal length of each segment and there is a distinct, opaque, elongate, wedge-like black spot in the middle of the second, third and fourth segments. Length 6 mm.

Male. *Head*: face and front light yellow, the face short, the narrow cheeks blackish, the scant pile white except opposite the antennae where it is blackish. Lower sides of the face with a large triangle of white pubescence. Antennae reddish brown, paler ventrally except upon the outer two-thirds of the third segment. Arista blackish. Vertex violaceous with blackish pile. Occiput black with metallic reflection and greyish white pollen and pile, the latter but slightly flattened. *Thorax*: mesonotum metallic black with sharply defined shining blue medial stripe overlaid by faint grey pollen. The humeri are pale yellow, the notopleura and remainder of the lateral margin metallic blackish. Scutellum brassy black, the posterior margin yellow, the yellow not extending to the base. Pile of mesonotum fine and yellow; scutellar pile of the same color and longer with five or six long, black hairs on the margin; the posterior half of the mesopleura and a large spot on the upper sterno-

pleura yellow, the remainder of the pleura shining black, in places with brassy reflections. Squamae yellowish white, the halteres reddish orange. *Legs*: anterior femora yellow with wide, diffuse, subapical band, their tibiae pale yellow with a brown spot in the middle ventrally and their tarsi brown. Middle femora yellow with still wider subapical brown annulus and with a subbasal, dorsal, brown spot. The yellow tibiae are faintly brownish just beyond the middle, the base of the basitarsi yellowish and the remainder brown. Hind femora pale yellow on the basal third, narrowly at the apex, but widely shining black between. These femora a little thickened. The hind tibiae are entirely black except quite narrowly at the base, the tarsi entirely blackish sepia. *Wings*: hyaline, pterostigma pale brown, the alulae narrow but wider than the basal section of the costal cell. *Abdomen*: slender, slightly increasing in width to the end of the fourth segment, the first segment shining black except linearly along the lateral anterior margin and with a medial, opaque black vitta and there is a narrow, yellow vitta or stripe lying upon the lateral margin reaching neither the base nor the apex. Third segment shining black with opaque black medial vitta and with more prominent, sharply marked, yellow lateral stripe which runs from the base two-thirds the length of the segment. Fourth segment in every way similar to the third. Fifth segment similar but shorter, the lateral yellow stripe not quite so large and the opaque medial spot absent. Hypopygium shining black apically but otherwise yellowish brown.

Female. Similar to the male, the middle of the front metallic black, the face faintly brownish in the middle, the abdomen a little wider and faintly oval with the same pattern of yellow spots and opaque medial vitta. Fifth segment with an oval, opaque black spot in the middle.

*Cotypes* as follows: 3 males, Nova Teutonia, BRAZIL, Fritz Plaumann, one female, same data.

**Baccha lucretia** n. sp.

A dark sepia blackish species with yellow face and four slender yellow vittae upon the third, fourth and fifth segments of the abdomen. Related to *notata* Loew. Length 8 mm.

Male. *Head*: the vertex dully shining black with a single row of black hairs. The front is pale yellow upon the sides with the yellow margins meeting at the junction of the eyes and with a large, black, faintly shining triangle in the middle of the front which anteriorly rests upon the large yellowish pre-antennal callosity and emits short, lateral, arms enclosing the upper portion of the callosity. In the center of the callosity is a large, shining black, anteriorly angular, posteriorly rounded, black or purplish black spot. The face is pale yellow with a reddish brown wedge medially reaching from the center of the tubercle up to the base of the antennae. Cheeks pale yellow tinged with brown in the middle. Pile of face white and of the front black. The first and second segments of the antennae are pale yellowish brown; the third segment is brownish orange below, blackish above, narrowly towards the base and widely towards the apex. Arista narrowly reddish at the base and blackish upon the remainder. Occiput grayish yellow pollinose with a single row of fine, non-flattened, yellow hairs. *Thorax*: mesonotum brassy black with the lateral margins narrowly but continuously pale yellow including the humeri and the post calli. Middle of mesonotum with a pair of widely separated, relatively narrow, light reddish brown pollinose vittae which become evanescent one-fourth of the length of the mesonotum measured from the scutellum. The scutellum is light yellow with the disc becoming brownish, which is more evident when viewed from the side. The pile upon the surface of the scutellum is very fine, scanty and comparatively short. I can find no evidence of ventral fringe hairs. Mesonotal pile also short, scanty and pale brownish or reddish in color. There is no anterior collar. The pleura are metallic black with the propleura, the posterior margin of the mesopleura and a spot upon the upper sternopleura yellow. Halteres sepia, squamae with border and fringe also dark sepia. *Legs*: anterior pair en-

tirely light yellow; the middle legs are the same color except that their femora tend to be pale brown subbasally. The hind femora, their tibiae and the basal two-thirds of the hind basi tarsi are dark sepia brown. Viewed in some lights, the hind femora in some individuals are a little lighter than their respective tibiae but have a wide, blackish, subapical annulus. The remainder of the hind tarsi are pale brownish orange or yellow. *Wings*: moderately wide and wholly and uniformly dark sepia-brown. The alulae are quite slender and only at the apex are they wider than the basal section of the costal cell. Preanal spuria faint. Third vein straight but very slightly carried down at the apex of the wing by the costa. Subapical cross vein gently sigmoid, the lower ends of subapical and lower cross veins each with well developed spur. Anal vein quite straight. *Abdomen*: slightly spatulate and deep sepia-brown, almost black, with conspicuous, sharply defined, light yellow vittae. The first segment is yellow on the sides and brownish black in the middle, especially posteriorly. Anteriorly the lateral yellow spots are sharply pointed and angular and extend towards the middle of the segment. The second segment is subcylindrical, brownish black and about two and one-fourth to two and one-half times as long as its posterior width; the sides are almost parallel but the segment is slightly wider anteriorly. Just past the middle there are a pair of nearly transverse, yellow, medially enlarged spots which are narrowly separated. Third segment about one and a half times wider posteriorly than basally and a little longer than twice its basal width. It is brownish black with a pair of slender, posteriorly rounded, but wider and widely separated, submedial yellow vittae. Lying outside of these vittae posteriorly are two short, yellow, wedge-like spots. All four of these vittate spots end a considerable distance from the posterior margin of the segment but the submedial pair are slightly longer. Fourth segment similar in general pattern to the third, the segment equally wide anteriorly and posteriorly, the submedial vittae of the same position, width and thickness but extending closer to the posterior margin, the outlying pair of vittae also originating at the base of the segment, extending



two-thirds the length of the segment and distinctly but slightly curved towards the medial vittae leaving the concavity lateral. The fourth segment is about one-fourth to one-third longer than wide. The fifth segment is half as long as the fourth, the middle pair of vittae slightly convergent, the outer pair like those upon the fourth segment originating at the base but wider basally than the submedial pair and much shorter; they, therefore, appear as acute wedge-shaped spots. Hypopygium polished brassy or brownish black. Pile of abdomen everywhere blackish.

Female. Similar in nearly every respect to the male, the front is widely blackish in the middle with narrow, yellow, lateral margins which reach as far as the anterior ocellus. The wings are perhaps slightly wider but tend to be a little paler, leaving a slightly accentuated, very large, brown, quadrate, darker spot in the middle. This is perhaps due to tenerality of which there is some evidence. However, the last section of the first posterior cell as measured by a transverse line through the lower end point of the subapical cross vein is shorter. This cross vein is then more sigmoid. *Abdomen*: similar to the male, the second segment is not quite twice as long as wide, the third and fourth are a little shorter. The fifth is somewhat longer and larger and the sixth is about one-fourth as long as the fifth and is transverse with the posterior margin in the middle a little bit rounded and elevated. The total width of the abdomen is slightly greater.

*Holotype*: male, Chanchamayo, PERU, August 19, 1948, J. Schunke. *Allotype*: female with the same data, but August 11, 1948. *Paratypes*: three males, June 20–Aug. 11, and Aug. 19, 1948. In the author's collection.

### ***Salpingogaster urania* n. sp.**

Related to *compressa* Curran. This species is distinguished by the subapical spur upon the second vein and the absence of a brownish yellow border upon the second cubital vein. Length 15.5 mm.

Male. *Head*: face and cheeks pale yellow, the front very dark shining red, prominent and protuberant with a narrow,



conspicuous, bright yellow margin along the eyes, meeting at the eye junction but confined to the upper half of the front only. Preantennal callus concolorous with front. First antennal segment of the same color. Second and third segments brownish red, the third smoky brown on the dorsal half, the arista light brown at the base, dark brown apically. Pile of front short, subappressed and black. Pile black on the upper part of the face, short, fine and yellow below. Vertex shining black. Occiput black except ventrally where it is yellow, the pollen pale grey, the pile yellowish white becoming more reddish above. *Thorax*: mesonotum dark reddish brown except as follows: the humeri, a wide band along the notopleura to the transverse suture, a spot medial and adjacent to the humeri and the posterior calli, all light yellow. The posterior portion of the mesonotum also becomes more yellowish pollinose. Also on the mesonotum there are three, quite obscure, narrow, dark reddish sepia vittae. The outer pair are a little expanded where they cross the suture and all three are narrowly continued to within a short distance of the scutellum. Scutellum pale yellow with a faint, transverse, light brown band occupying most of the disc except the immediate base. Mesonotal pile short, subappressed and yellowish. Scutellar pile still shorter, sparse, yellow with a few minute microscopic black setulae. Pleura reddish brown, a diagonal yellow stripe confluent with the notopleural band runs down the posterior margin of the mesopleura and ends in a small spot on the upper sternopleura. Squamae dark brown, upper squamae more reddish. Halteres yellow, the knob sepia. *Legs*: anterior and middle femora and tibiae entirely rich light yellow, their basitarsi more yellow, their remaining tarsi more of a pale orange brown, their coxae reddish sepia. Hind femora yellowish in the middle and apically, diffusely reddish brown basally and subapically. Hind tibiae entirely yellow with yellow pile. Hind tarsi orange brown. *Wings*: nearly hyaline, the entire costal cell, the subcostal cell as far as the pterostigma, the marginal cell as far as the pterostigma yellow in color. The basal portion of the upper half of the first basal cell, the narrow margin along the

cubital vein as far as the mediocubital cross vein, narrowly margined with yellow. The pterostigma is very dark sepia, almost blackish. The marginal cell from the base of the pterostigma outward and the end of the submarginal cell is also dark sepia. The end of the marginal cell, in both wings, in five specimens, has a distinct short spur. The loop of the third vein is extremely deep, suboblique and rounded. The subapical cross vein bulges far outward on its apical two-thirds and is deeply kinked inward on the basal portion. Alulae narrow and pale, scarcely wider than the basal section of the costal cell. First segment of abdomen pale yellow, narrowly reddish along the posterior margin, except laterally, second segment quite long and subcylindrical, light red in color, except narrowly on the basal margin which is pale diffusely yellowish. The third segment is narrow basally and reddish brown becoming widely expanded posteriorly and dark reddish sepia. Fourth segment a little wider basally than posteriorly and also dark reddish sepia throughout. Fifth segment of the same color but less than half as long as the fourth segment. The fourth segment is barely shorter than the third and the third segment is approximately three-fifths as long as the second. Hypopygium light brownish red, conical and ending in a rather sharp point posteriorly. The fifth sternite turns straight downwards in two brownish red lobes, densely beset with rather long, stiff, bristly black hairs.

*Holotype*: male, Chanchamayo, PERU, June 8, 1948. *Paratypes*: 3 males with the same data and one paratype male, May 1948, J. Schunke. In the author's collection.

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### Ladybird Beetle Feeding Notes

By GEORGE F. KNOWLTON, Utah State Agricultural College,  
Logan

A five-spotted ladybird beetle, *Hippodamia quinquesignata* Kirby, was found to be feeding on a tiny wingless aphid, *Phorodon menthae* (Buckton), on *Mentha spicata* at Nephi, Utah, June